

ORANGUTAN CONSERVATION SERVICES PROGRAM

BEST MANAGEMENT PRACTICES FOR ORANGUTAN CONSERVATION INDUSTRIAL TIMBER PLANTATIONS





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Introduction



The Sumatran orangutan - *Pongo abelii* - is classified as Critically Endangered (CR) on the IUCN Red List 2007 and listed on Appendix I of CITES.

Orangutans are among the most threatened large mammal species in the world. In part, this is because most orangutans live outside the protected area network and consequently suffer multiple threats from forest conversion, hunting, and development.

The Sumatran orangutan, which is classified as critically endangered, is considered the most likely great ape species to become extinct in the wild in the near future. The Bornean orangutan is listed as endangered. Both species are fully protected under national laws. Within protected areas, management of orangutan habitat is relatively straightforward and firmly embedded within the Indonesian legal framework: forests are protected and hunting is prohibited. The main concern within these areas, then, is to ensure that the laws are effectively implemented.

In forest areas not under protection status, Indonesian (and Malaysian) law mandates that the killing of orangutans is illegal. However, these forests can be legally degraded or converted as long as animals are not directly killed in the process. This has resulted in rapid reduction of remaining orangutan habitats, with animals in these increasingly small habitat patches forced to survive on diminishing food resources. Such a situation leads to conflicts with humans when orangutans facing scarcity of food resources feed on available commercial crop species, such as oil palm, acacia, or village fruit trees. Orangutans raiding and destroying commercial crops are often viewed as pests and, even though it is illegal, are killed.

In addition to standing laws on the protection of orangutans, in 2007, the Government of Indonesia further committed itself to stop the decline and stabilize wild orangutan populations by 2017 through the release of the Indonesian Orangutan Conservation Strategy and Action Plan 2007-2017 (the Orangutan Action Plan). The Plan lays out objectives and targets for orangutan conservation and the actions and responsibilities of all interested parties to achieve them. One of the steps that the Indonesian government calls for to improve the in-situ conservation of orangutans is the protection and rehabilitation of orangutan habitats that are owned or influenced by companies in the mining, forestry and plantation industries. This action clearly calls for greater involvement of natural resource companies in the management of orangutan habitat. In addition, the growing twin influences of corporate responsibility and sustainable practice further encourage companies to adopt and implement a strict set of principles and criteria so that they can demonstrate sustainable use of natural resources – including biological diversity – as well as sensitivity to economic, social, and environmental considerations.

For timber plantation companies operating in Indonesia, a problem that arises is how to reconcile legal permitting in areas that are crucial as habitat for orangutans, on the one hand, with the formal protected status of this species, sense of corporate responsibility, and commitments to sustainable operating practices, on the other. Apart from an obvious recommendation to keep plantation forestry out of orangutan habitats, there is little guidance to either government or industries on how to plan for and manage the conservation of orangutans.

USAID has identified this lack of guidance as a critical weak point in the conservation of orangutans. Consequently, it has charged the USAID Orangutan Conservation Services Program (OCSP) to develop a set of guidelines that detail actions to be taken by companies to demonstrate Best Management Practices (BMPs) to protect orangutans within their concessions. OCSP is also tasked to work with other stakeholders to conserve orangutans in the greater landscape in which their concessions are embedded.

This document presents a brief overview of BMPs that can help conserve orangutans and their habitat within timber plantation concessions. It provides guidance, but is not an exhaustive overview of BMPs. It draws on overarching principles to provide direction for companies seeking to incorporate BMPs within their concessions. It serves as a basis for initial discussion within a company, as well as with stakeholders, and may be modified and amplified as a result of lessons learned and stakeholder input. Adaptive management based on clear monitoring and evaluation of activities is the key to implementation of these recommended BMPs.

Background



Orangutans will strip bark from trees to feed on the sap.

Orangutans in Industrial Timber Plantations

The development of plantations for the production of pulp and paper generally involves the clearance of forest and scrub vegetation, after which fast-growing trees are planted for the production of tree fiber. Such monocultural plantations have traditionally been thought to offer little or no food resources for orangutans, which would effectively reduce the carrying capacity of such plantations for orangutans to zero. Some plantations, however, have been shown to provide sufficient food resources for orangutans to survive in them, at least for short periods. *Acacia mangium*, which is commonly planted in paper and pulp plantations, provides some nutritional value to orangutans. The tree sap and inner bark (cambium) are high in sugars.

There are few science-based observations on the ecology of orangutans in industrial timber plantations. One preliminary study investigated densities of orangutan in *Acacia mangium* plantations near a national park and generally found low-to-medium orangutan densities, but in some localized areas these densities were high. It is presumed that these orangutans moved back into the plantations from surrounding stands of heavily degraded forest for short periods to supplement their diets with acacia sap and cambium. However, orangutan specialists that were consulted considered it unlikely that orangutans could derive the nutrition that they require to survive and successfully breed in the long term solely from a monoculture plantation.

In cases where orangutans use acacia trees to supplement their diet, their impact on a plantation's operations is often deleterious. This is because orangutans must strip the bark to feed on the sap in the cork cambium, and in doing so, they destroy substantial numbers of trees. At times, the rate of tree crop loss in plantations is high enough to impact potential plantation revenue. Such was the case in an acacia plantation where orangutans are reported to regularly feed on the bark of 2-3- year-old trees. Tree stands in this plantation were reportedly destroyed at the rate of some 300 hectares per year. Such a scenario increases the likelihood of conflict with the raiding orangutans.

There is a very real threat posed by orangutans to plantation tree stands, particularly acacia. Companies want to protect their trees and, in so doing, create conflict situations with

orangutans. Such potential conflicts need to be avoided or resolved. Experience dictates that resolution of such conflicts will be site specific and depend largely on gathering specific information on each concession. There is then a need to compile information and data upon which to base rational management of orangutans.

Resolution of human-orangutan conflicts poses particular problems for concessionaires because orangutans have more sophisticated cognitive abilities than most other animals. Thus they have advanced abilities for social learning and solving problems innovatively and behaving flexibly. This makes it difficult to develop effective counter measures in the long term. Given their protected status, orangutans that become a problem in concessions should only be repelled, removed, or tolerated.

A range of options is available to concessionaires to mitigate human-orangutan conflict, including both preventative and curative actions. These options include:

- i) physically chasing animals away from acacia trees before they damage them.
- ii) establishing corridors by protecting any natural vegetation remaining in such areas and by planting local tree species in degraded, potential corridor areas.
- iii) where the conflict results from a lack of natural resources, increasing the supply of alternative resources is one solution used by several concessions in Kalimantan. For example, the preferred option is for locally available trees to be planted along the inner margins/buffer zone of a plantation or in other conservation corridors that link to the larger landscape.
- iv) installing barriers, including the establishment of buffer zones, boundary canals and electric fences.
- v) clearing pathways for daily patrolling.
- vi) enforcing existing wildlife regulations that protect orangutans.
- vii) using predator decoys (including predator dummies), releasing odors, and playing back vocalizations.
- viii) translocating the animals to new locations, which is the option of last resort in cases where a small number of orangutans is isolated from larger populations. (However, the decision on whether to relocate orangutans can only be made by the provincial conservation authority, known as BKSDA.)

Clearly a strategy to ameliorate these threats to orangutans largely relates to management of the greater landscape and the development of corridors within all concession sector types to encourage orangutans to move freely through landscapes, into and out of concessions.

The Indonesian government mandates that both riparian vegetation strips (Water Act No. 7 of 2004; Environmental Act No. 32 of 2009; Conservation Act No. 5 of 1990; and Spatial Act No. 25 of 2007) and set-aside areas for conservation of wildlife (Conservation Act No. 5 of 1990) should be established within concessions. Riparian strips should be at least 50 meters

wide on either side of a first order river, while the set-asides should be at least 100 hectares for each five-year concession development plan (RKLT, *Rencana Kerja Lima Tahun*) – at least for natural forest timber concessions. The area for set-sides in mining, industrial plantation and oil palm concessions is less clear. The extent to which concessions have these riparian vegetation strips (which can effectively serve the role of wildlife corridors) and set-asides for wildlife varies greatly. Indeed, much remains to be learned about how best to design and manage corridors and set-asides in concessions to conserve orangutans while minimizing the economic losses to companies.

Little is known about orangutan survival in plantations of other crops, such as *Albizia falcataria*, or *Eucalyptus* spp., although it appears that these species are less attractive as a food source to orangutans. These less palatable trees may be useful to plant as a buffer zone between the plantation and orangutan habitat. Further studies are needed to determine both the extent to which orangutans use these and other non-acacia plantation tree species, and if they can survive in a matrix of *Eucalyptus* and *Albizia* monocultures and secondary forest. However, in the selection of such species one needs to be cognizant that they may

Table 1: SOME FAST-GROWING TREES THAT PROVIDE FOOD FOR ORANGUTANS AND THAT COULD BE GROWN SURROUNDING PLANTATION CONCESSIONS AND IN BOTH CONSERVATION CORRIDORS AND SET-ASIDES.

Species	Used by orangutans
<i>Anthocephalus chinensis</i>	Bark and fruits
<i>Artocarpus</i> spp.	Bark, fruits, and shoots (but trees are damaged by feeding). Jackfruit (<i>Artocarpus heterophyllus</i>) should be avoided to prevent conflict with people, who also eat this fruit.
<i>Dracontomelon</i> spp.	Fruits
<i>Cananga odorata</i>	Fruit/flowers; and preferred nesting tree
<i>Pometia</i> spp.	Some fruit eaten
<i>Ficus</i> spp.	Fruits, leaves and inner bark
<i>Diospyros</i> spp.	Fruits and leaves
<i>Eugenia</i> spp.	Fruits and leaves
<i>Sandoricum</i> spp.	Fruits
<i>Uncaria</i> spp., <i>Spatholobus</i> spp., <i>Bridelia</i> spp. <i>Lophopyxis</i> spp.	Leaves and fruits

be unsuitable to plant for other reasons. For example, eucalyptus trees have highly inflammable leaves that may increase the risk of wildfires in a concession; they also rapidly draw down water tables and have a high demand for soil nutrients.

The immediate priority for an industrial timber plantation concession manager is to undertake the conservation measures already prescribed by Indonesian law to conserve orangutans, namely maintain core conservation areas, protect riverine forests, and maintain a system of forest corridors between different patches of forest, both within the concession and in the greater landscape. The highest value forests for orangutans are those not affected by any timber removal. However, such forests are rare in industrial timber plantations, many of which are in areas formerly occupied by timber concessions with a history of high timber extraction, which leaves remaining conservation areas and potential corridors highly degraded.

Ideally, such areas would be replanted with fast-growing trees that provide preferred foods for orangutans (see Table 1). Placement of corridors to allow orangutans to move through oil palm concessions should, where possible, be at the margins of a concession and adjacent to forest that is suitable habitat for orangutans. A buffer of trees unpalatable to orangutans could line the inner margin of such corridors. In this way, orangutans would be discouraged from moving deep into a plantation, reducing the potential for human-orangutan conflict.

In general, it is best not to plant species that are also sought by people, such as rattan and palms, mango (*Mangifera* spp.), rambutan (*Nephelium lappaceum*), and marketable durian (*Durio* spp.). When species attract both people and orangutans, conflicts are more likely to occur. Selection of suitable species for planting should be considered at an early stage given the time required for their establishment.

Who uses this guide?

This BMP guide is written to assist companies operating forest plantations that have orangutans present to meet their corporate responsibilities to manage the environment and biodiversity, and to comply with the policy of the Indonesian government as set out in its Orangutan Action Plan. It is targeted at the operational level and is designed to guide both general and environmental managers to address the needs of orangutans to enable them to survive within concessions. While it is clear that companies have a responsibility that focuses on their concession, the BMPs also allow environmental managers to view how a company's operations may impact orangutans in the greater landscape. This can be achieved through engagement as a responsible stakeholder in landscape-scale efforts, such as working with forums, communities and local authorities to assist in the development of rational multiple-use land-use plans, and in the implementation of such plans. This guide can also be used by local and international financial institutions to better understand the non-financial risks, both environmental and social, of investing or providing credit to resource companies as a means to ensure that business practices of plantation concessionaires are not destructive to orangutan and their habitat. It can also be used by government and community agencies to assess the extent to which concessions adopt BMPs to conserve orangutan.

Why companies should improve their practices to conserve orangutans

The benefits to a company of having operations that are environmentally responsible are well documented. Good planning and management of orangutans enhances a company's reputation in the country and internationally, as well as with local communities, and reduces reputational risk. Some of the benefits of such practices include:

- Increased creditor and investor confidence and loyalty and better access to capital.
- Better share value.
- Improved relations with NGOs.
- Improved access to land, both at the initial stages of project development and for ongoing exploration to extend the lifetime of existing projects.
- Shorter and less contentious permitting cycles as a result of better relationships with regulatory agencies.
- Improved community relations.
- Enhanced employee relations.

Government policy objectives underlying company responsibilities

The Orangutan Action Plan calls on all stakeholders to agree to implement a series of recommended actions necessary to maintain the population and habitat for orangutans in a stable condition by 2017. This Plan, which is the basis of activities to conserve orangutans in Indonesia, requires all companies with a stake in the management of orangutans to support actions for their protection, management and conservation.

Overall objectives and outcomes for responsible management of orangutans

The overall objectives are improved prospects for orangutan survival in industrial plantation concessions and enhanced business value for companies. Companies should seek to minimize their impact on orangutans in their sphere of influence. This can be achieved through careful planning and application of BMPs, improving and increasing orangutan habitat set-asides within concessions and offsets outside their concessions, and participation in conservation efforts in the greater landscape in collaboration with other local, regional and national actors.

Positive and negative impacts on orangutans in the long term will depend on how well a company:

- Understands the ecological and behavioral requirements of orangutans, especially for shelter, space, food, and both social structure and space.
- Recognizes the potential threats to orangutan from operational practices during assessments and planning of the project development phase.
- Identifies and manages potential biodiversity risks and opportunities during project development, implementation and operational stages.

Ideally, operations should be planned to avoid disturbance of orangutan habitat, including corridors that are used to connect areas of natural forest within the plantation. However, these practical and technical considerations may result in the realization that disturbance is recognized but unavoidable. For example, a concession may have a few orangutans remaining in patches of vegetation that are too small and are unconnected to other patches of habitat suitable for orangutans. In these situations, orangutans will not survive within the concession. This may lead to the conclusion that the least favored conservation solution may have to be applied, namely to have them translocated to another area. Responsible companies may then consider purchasing suitable land for these orangutans near their concessions as a conservation offset, and translocating the surviving orangutans to this offset area. In this way, companies will help ensure that overall numbers of orangutans are not diminished in their general area of operations.

Summary of Commitment

For a company to demonstrate sustainable plantation practices, comply with the Orangutan Action Plan, and operate its businesses responsibly and sustainably in orangutan habitat areas, four main areas of commitment are recommended. These are:

I. CORPORATE COMMITMENT TO PROTECT ORANGUTANS

A company requires support at all levels to achieve best management practices that ensure the long-term survival of orangutans in its concession. To assist with this, it should:

- I.1 Commit to the goals and objectives of the Orangutan Action Plan.
- I.2 Make a publicly available policy statement for the protection of orangutans.
- I.3 Ensure that orangutans are sensitively managed within the concession.
- I.4 Work towards and report on orangutan status and management in the concession in accordance with international standards of reporting.

2. COMPLIANCE WITH LAWS AND REGULATIONS

For a company to operate responsibly it should demonstrate compliance with laws (both statutory and customary), regulations, international treaties and agreements to which Indonesia is a signatory. Namely, it should:

- 2.1 Respect national and local laws and administrative requirements related to environmental and biodiversity protection.
- 2.2 Work with provisions of all binding international agreements that relate to orangutan conservation.
- 2.3 Ensure that orangutan habitat will be protected from illegal and unauthorized activities.
- 2.4 Show clear evidence of local communities' long-term legal or customary ownership and use rights to the land.
- 2.5 Respect local communities' legal or customary tenure and use rights while protecting orangutans.

3. ORANGUTAN MANAGEMENT PLANNING, IMPLEMENTATION AND MONITORING

A company should ensure that the long-term objectives of orangutan management, and the means of achieving these objectives, are clearly stated and monitored. This requires that it develop an orangutan-sensitive conservation management plan, which is implemented and monitored. It should:

- 3.1 Ensure that a comprehensive conservation management plan for orangutans is developed that is in line with BMPs for orangutans. This conservation plan should be an appendix in the company's overall environmental management plan.
- 3.2 Identify a point of contact or team to take the lead in coordinating activities related to orangutan management.
- 3.3 Create and conduct an education program for all employees and contractors on the importance of orangutan conservation.
- 3.4 Ensure all monitoring and evaluation is incorporated into a long-term adaptive management conservation plan.
- 3.5 Develop Standard Operating Procedures, work instructions and guidelines to support implementation of the conservation plan for orangutans.
- 3.6 Communicate to local communities the importance of conservation of orangutans and ways to mitigate threats to them.
- 3.7 Collaborate with conservation scientists and seek technical advice from them when required.

4. LANDSCAPE-LEVEL COLLABORATIVE MANAGEMENT

A company should collaborate with government, communities and private sector land managers to conserve orangutans both inside its concession and in the greater landscape. In particular, it should:

- 4.1 Participate in landscape level multi-stakeholder collaborative management groups to rationalize land-use conflicts, including for orangutans and their habitat.

Management of Orangutans and their Habitat in Industrial Timber Plantations

COMMITMENT #1: CORPORATE COMMITMENT TO PROTECT ORANGUTANS

A company requires support at all levels to achieve best management practices that ensure the long-term survival of orangutans in its concession. To assist with this, it should:

1.1. Commit to the goals and objectives of the Orangutan Action Plan.

Scope: The Orangutan Action Plan is the basis for activities to conserve orangutans in Indonesia. The Plan requires all companies with a stake in the management of orangutans to support actions for the conservation and management of orangutans and their habitats.

Actions recommended:

A company should commit to the goals and objectives of the Orangutan Action Plan and any government policies that follow from that. The company should incorporate its commitment to the goals of the Plan into its policy, procedures, and operational management plans by taking the following actions:

- Develop and implement an orangutan-sensitive conservation management plan within its concession. (See Annex 1. General guide to developing conservation management plans.)
- Develop standard operating procedures for the protection of orangutans and their habitats (including habitat management, rescue activities, conflict mitigation, and community involvement). (See Annex 2. General guide to incorporating conservation measures in standard operating procedures.)

- Contribute to community education and development activities in the vicinity of orangutan habitats that are conducive to conservation of orangutans. (See Annex 3. General guide to development of community education and community engagement in conservation activities.)
- Build and maintain corridors between fragmented patches of orangutan habitats within and adjacent to its concession, where possible.
- Develop a monitoring and evaluation system to assess performance of implementation of its conservation management plan. (See Annex 4. General guide to development of monitoring and evaluation systems.)
- Ensure operations minimize negative impact on orangutans and their habitats.
- Collaborate with other stakeholders to conserve orangutans at the landscape level.

1.2 Make a publicly available policy statement for the protection of orangutans

Scope: A company should demonstrate full transparency in its implementation of its orangutan-sensitive conservation management plan by publicly demonstrating that it is adhering to the principles of orangutan BMPs.

Actions recommended:

- Commitment to minimize impacts on orangutans in the landscape.
- Commitment to adhere to national and internationally binding regulations.
- Commitment to make public its data and information on orangutans, and on its monitoring and operational actions to conserve orangutans.
- Commitment to respect customary indigenous rights and legal requirements.
- Commitment to engage with communities and stakeholders in a fair and transparent manner.
- Commitment to identify and consider all threats to orangutans that may result from the company's strategic management decisions.

1.3 Ensure that orangutans are sensitively managed within the concession

Scope: A company should consult with experts, NGOs and other stakeholder groups to work towards maintaining the presence of orangutans within its concession.

Actions recommended:

- Implement silvicultural and other types of habitat management approaches and techniques to minimize impact on areas used by orangutans.

- Protect key ecological resources for orangutans in conservation set-asides and habitat corridors. (See Annex 5. Key ecological resources required by orangutans.)
- Work to prevent hunting of orangutans by company employees, contractors and others.

I.4 Report on orangutan status and management in concessions to international standards

Scope: A company should employ transparent and timely reporting to demonstrate to stakeholders and the environmental community that biodiversity within the scope of its management area is monitored and evaluated. The company should include information on orangutans in its environmental reports where its operations are located in orangutan-sensitive areas. While adherence to these standards is voluntary, compliance with these standards enhances a company's external transparency and responsibility in managing its impacts on orangutans, and serves as an internal guide on its performance against its stated corporate orangutan policy. Reporting to these guidelines is in addition to any formal government environmental reporting requirements.

Actions recommended:

A company should comply with internationally accepted standards for biodiversity reporting, namely:

- Collect all information on its concession relevant to the development of BMPs.
- Document and describe significant threats to biodiversity within its concession. (See Annex 6. Potential threats to orangutans.)
- Gather and make publicly available information on locations where orangutans occur; using GPS if possible. This should include relative abundance estimates, and their key ecological resources and nest sites. Information on habitat types should be divided between natural, created and enhanced, and artificial (new habitats), by area and known orangutan presence. (See Annex 7. Maps of the distribution of orangutans in Kalimantan and Sumatra).
- Detail strategies, current actions, and future plans for managing threats to biodiversity and orangutans.

COMMITMENT #2: COMPLIANCE WITH LAWS AND REGULATIONS

A company should demonstrate compliance with laws (both statutory and customary), regulations, international treaties and agreements to which Indonesia is a signatory. To demonstrate this, a company should:

2.1 Respect national and local laws and administrative requirements related to biodiversity protection

Scope: A company should comply with relevant laws and regulations of Indonesia that have implications for orangutans and their habitats. In addition, a company should be aware of any provincial or district laws and regulations that apply in the location of its operations. A company should also ensure that all required permits are obtained and updated. The national laws of Indonesia that are relevant include, but are not limited to, the following:

- Act No. 5 of 1990 on Conservation of Biodiversity and Ecosystems.
- Act No. 5 of 1994 on Biodiversity Conservation (Ratification of Convention on Biodiversity).
- Act No. 23 of 1997 on Environmental Management.
- Act No. 41 of 1999 on Forestry.
- Act No. 1 of 2004 on Revision of Act No. 41 of 1999 on Forestry.
- Act No. 19 of 2004 on Stipulation of a Government Regulation for Environmental Emergencies.
- Government Regulation No. 68 of 1998 on Nature Protection Areas and Nature Conservation Areas.
- Government Regulation No. 7 of 1999 on Preservation of Wild Plants and Animals.
- Government Regulation No. 8 of 1999 on Wildlife Uses.
- Government Regulation No. 4 of 2001 on Controlling Environmental Damage from Forest Fires.
- Government Regulation No. 14 of 2004 on Requirements and Methods for Transferring Protected Tree Varieties and Using Government-protected Varieties.
- Minister of Forestry Regulation No. P.43/MENHUT-II/2008 on Leases in Production and Outlines of Conservation Forest Areas for Non-forestry Use.
- Minister of Forestry Regulation No. P.19/MENHUT-II/2004 on Collaborative Management of Forest Areas.
- Minister of Forestry Decree No. 519/Kpts-II/1997 on Environmental Impact Assessment, Environmental Management and Environmental Monitoring in Forestry Development.
- Minister of Forestry Decree No. 355/Kpts-II/2003 on Specimen Wildlife Code.
- Minister of Forestry Decree No. 447/Kpts-II/2003 on Procedure Taken, Catching and Distribution of Wildlife.

In addition, a company should demonstrate compliance with:

- Act No. 5 of 1990, Articles 21 and 22.

- Act No. 41 of 1999, Articles 40 through 51.
- Minister of Forestry Regulation No. P.48/Menhut-II/2008 on Guidelines for Overcoming Conflict between Humans and Wildlife.
- Minister of Forestry Regulation No. P.38/Menhut-II/2009 on Standards and Guidelines for Performance Assessment of Sustainable Production Forest Management and Verification of Timber Legality for Permit Holders and Forest Concessionaries.
- Minister of Forestry Decree No. SK.101/Menhut-II/2004 on Accelerated Timber Plantation Development to Meet Industrial Pulp and Paper Raw Material Needs.

Actions recommended:

- Be familiar with and make available a document summarizing central government, provincial and district laws and regulations relevant to orangutans and their habitats, and possible implications of these on planning and operational decisions, and on the conduct of employees and contractors.
- Conduct a communication program to ensure that senior management is in a position to consider these legal issues and comply with the law when making decisions.
- Conduct a communication program for employees and contractors that ensures that their actions when dealing with orangutans and their habitat comply with the law.
- Develop a documented system to identify, track, close out and report on issues relating to potential legal non-compliance by the company, employees, and contractors.
- Ensure all permits that relate to activities that may impact orangutan habitat are maintained in a permits register.
- Publicize legal requirements and obligations to all employees and contractors on an annual basis as part of work reviews.
- Develop procedures for compliance assessments and demonstrate internal enforcement and penalties in the event of identified breaches of law.
- Instigate an internal reward and punishment system for employees and contractors to promote compliance.

2.2. Comply with the provisions of all binding international agreements that relate to orangutan protection

Scope: A company should not only be in compliance with national laws and regulations but also meet the intent of international agreements and conventions to which Indonesia is a signatory. The international agreements that relate to the protection of orangutans are as follows:

- Convention on Biodiversity (ratified through Act No. 5 of 1994).
- Kinshasa Declaration of Great Apes.
- CITES.

- Tropical Timber 83.
- Tropical Timber 94.
- Ramsar Convention.

Actions recommended:

A company should disseminate requirements within these conventions and international agreements to all employees and contractors where relevant and should demonstrate incorporation of these provisions within operational planning and management, namely:

- Be familiar with and make available a document summarizing international conventions relevant to orangutans and their habitats and possible implications of these on planning and operational decisions, and on the conduct of employees.
- Ensure that all employees and contractors are aware of and understand the legal and administrative obligations with respect to relevant international agreements to which Indonesia is a signatory.
- Conduct a communication program to ensure that senior management is in a position to consider these issues when making decisions.
- Conduct a communication program to employees that ensures that their actions when dealing with orangutans and their habitat comply with these conventions.

2.3 Ensure that habitat of orangutans is protected from illegal and unauthorized activities

Scope: A company should protect its orangutan habitat from unauthorized harvesting and other activities in the concession. It should strive to have sufficient security and protection systems and capacity to support compliance with its orangutan-sensitive conservation management plan. Conservation set-aside areas should be delineated from operations at the planning stage due to the presence of rare, threatened or endangered plant or animal species.

Actions recommended:

- Identify and assess threats and practical interventions to reduce or eliminate threats.
- Standardize approaches for demarcation of conservation set-asides and notify local stakeholders of these boundaries.
- Consider the establishment of forest patrols by local community members and forest police (*polisi hutan*) across the concession. This is to identify and combat encroachment, fire risk, illegal activities and other issues.
- Ensure a system exists for monitoring, documenting and reporting to appropriate authorities any instances of illegal harvesting, settlement, occupation or other unauthorized activities.

2.4 Clearly document local communities' long-term legal or customary ownership and use rights to the land, where these rights exist

Scope: A company should show commitment to long-term ownership and use rights of local communities to the land and forest resources inside or bordering concessions. The land user rights should be clearly defined, documented, and respected.

Actions recommended:

- Document evidence of legal, long-term rights to manage lands and to utilize forest resources over any part of the concession.
- These rights should be agreed to by local communities with evidence of this consent.
- To ensure cooperation of local communities and secondary stakeholders is maintained, a mechanism should be employed to resolve a dispute which also documents the nature of the dispute and its resolution, particularly as it relates to orangutans and their habitat.

2.5 Respect local communities' legal or customary ownership and use rights while protecting orangutans

Scope: A company should respect the rights of local communities with legal or customary ownership or use rights to maintain control over these aspects in concessions to the extent required for them to protect these rights and meet their economic and cultural needs. Where possible, a company should engage these communities in forest management and protection of orangutans.

Actions recommended:

- Identify and support sustainable use of resources by local communities and take steps to ensure that customary and other rights are upheld.
- Recognize and support these user rights, which should be clearly identified and demarcated using participatory approaches, and recorded.
- Support formalization of user rights through a local decree.
- Give free, prior and informed consent to use rights of local communities or affected parties.
- Where appropriate, include participation of local communities or parties with legal or customary tenure or use rights in the management planning of concession forests.
- Create mechanisms for resolving disputes over land use claims and use rights that respectfully involve disputants so as to reduce the risk of conflicts endangering orangutans.

COMMITMENT #3: MANAGEMENT PLANNING AND MONITORING OF ORANGUTANS

A company should ensure that orangutans within the concession are sensitively managed. This requires development of an orangutan-sensitive conservation management plan, implementation and monitoring of the Plan. This Plan should be integrated and part of the overall environmental management plan. This will ensure that the long-term objectives of management, and the means of achieving them, will be clearly stated and monitored. To this end, a company should:

3.1 Ensure that a comprehensive conservation management plan for orangutans is developed that is in line with best management practices

Scope: It is generally recognized that plantations have limited habitat options for biodiversity when compared to natural forest types. Thus, the basis for a good plantation operation is a well planned and comprehensive conservation management plan that addresses the need to maintain, enhance and protect conservation set-aside areas and general biodiversity values. The general guidelines for best practice in environmental management systems are covered by ISO 14001. A company's orangutan conservation management plan would be considered satisfactory if corporate policy and objectives on orangutan protection are incorporated into environmental policy and management systems that strive for this standard. The conservation management plan needs to be appropriate to the scope and scale of operations and should clearly explain the long-term objectives of management, and the means of achieving them. One of the long-term objectives should be the protection of orangutans and their habitat in the area surrounding the concession.

Actions recommended:

A conservation management plan should be developed that includes but is not limited to the following:

- The aim, goals and objectives of the Plan should be clearly described in relation to conservation of orangutans.
- The Plan should include a clear description of the forest areas to be managed, environmental issues, land use patterns, ownership status, socio-economic conditions and a profile of adjacent lands.
- The long-term silvicultural and other management systems should be clearly described and justified in relation to requirements of any resident orangutans.
- The Plan should clearly show how rare, threatened and endangered species and/or their habitat are to be identified and protected. It should include all measures planned for the protection of orangutans in the concession, and identify habitat corridors to facilitate movement of orangutans around the edge (if possible) of a concession and to and from the greater landscape.
- The Plan should have a full complement of maps. These maps need to describe the

forest resources, including forest types, watercourses and drains, compartments/ blocks, roads, log landings and processing sites, protected areas, unique biological or cultural resources, and other planned management activities. They should also clearly map the distribution of orangutans in the concession and the immediate adjacent forest, food sources, key ecological resources such as old fruiting trees and mineral licks, and identification of biological corridors.

- The Plan needs to cover all environmental safeguards that will be used to ensure the integrity of the forest concession and orangutans within the concession. These safeguards need to be based on environmental assessments (AMDAL, RKL), with clear references as to how adverse impacts on the orangutans will be mitigated through management prescriptions. Special attention should be paid to measures undertaken to reduce human-wildlife conflict.
- The Plan needs to have a robust monitoring plan for all aspects of forest management, including orangutans. Where appropriate, all monitoring results specifically relating to orangutans should be reported back to the government so that its databases can be kept up-to-date, and to allow the government to assess progress in the Orangutan Action Plan.
- There should be detailed emergency response procedures for issues concerning orangutan encroachments, conflicts, disease and other possible incidents. A hazard/incident reporting system should be established that documents issues, actions, follow-up and closeout of orangutan matters.
- The Plan needs to include a full budget for all operations and planning. The budget needs to include a sufficient allocation to cover the cost of operations to conserve orangutans.
- The Plan should be linked to a database system for storing information on orangutans. Preferably, this should be a map-based system to enable comparisons of locations of orangutans such that their movements within the concession can be mapped. It is important that the results of monitoring orangutans are incorporated into the implementation and revision of the Plan. Non-confidential elements of the Plan should be made public.

The Plan should detail rehabilitation of orangutan habitat both inside the concession and in surrounding areas, which should be undertaken where possible. Other ecological and operational measures should include:

- Retention of large trees for nesting and fruit in areas surrounding planted parts of a concession.
- Closure of canal systems in rehabilitation sites and canals that bisect conservation areas.
- Monitoring of permanent sample plots for edge impacts within conservation set-asides.

- Monitoring of community access.
- Monitoring of rehabilitation planting through Permanent Sample Plots.
- Monitoring of external boundaries of conservation areas, and of boundaries adjoining harvesting locations.
- Expansion of riparian habitats to a minimum of 500m either side of river banks (mineral soil sites) in locations inhabited by orangutans, and linking them to conservation set-asides and adjacent forest outside the concession.

When planning for rehabilitation, additional actions for land preparation may have to be conducted, due to compaction or degradation as a result of infrastructure development. Due to the time delay in fruiting from seedling stock, the use of cutting stock is recommended, where feasible. Many orangutan food tree species, however, are non-commercial and may not be available. Monitoring should be instigated to support management objectives. This will be particularly important when trees are producing fruit to prevent conflict between humans and orangutans over harvest of such fruit.

Selection of species for rehabilitation of important orangutan habitat should be based on ecological characteristics (e.g. known orangutan food source, food source for other species, fast growing, native to area, and soil type). Generally, rehabilitation planting should use mixed tree species spaced at intervals of approximately 2 to 5 meters. However, in some instances planting of trees unpalatable to orangutans may be required as a barrier to deflect orangutans from moving deeper into a plantation. This may also include plantings of trees that are particularly favoured as nesting sites by orangutans. All available open areas should be investigated for rehabilitation, including but not limited to:

- Roadsides of access and operational roads.
- Drainage system edges.
- Post-operational log landing sites, sites used for vehicle turning, etc.

3.2 Identify a point person or team to take the lead in coordinating activities related to management of orangutans

Scope: A company should elect one person or a team to take responsibility for the management of all orangutan conservation activities. This person or team needs to be placed within the management structure and should have sufficient authority to influence crucial management decisions.

Actions recommended:

- Clearly assign roles and responsibilities for information dissemination and the implementation of management prescriptions to conserve orangutans.
- Develop job descriptions that state roles and responsibilities for internal and external communications.

- Ensure that the person or team responsible for orangutan management has access to all key information regarding concession planning, and is involved in management decisions regarding activities or plans that potentially affect orangutans

3.3 Create and conduct a training and education program for all employees and contractors on the importance of conservation of orangutans

Scope: A company should ensure that responsibility for conservation of orangutans and their habitat is the collective responsibility of management and all employees and contractors. To achieve this there is a need to disseminate this notion through direct education. The company should conduct awareness raising and educational actions with employees and contractors on the importance of orangutan conservation and management. These approaches should include but not be limited to information on legal status and penalties within employment contract and contract agreements for identified breaches of contract; the natural history of the orangutan and its ecological requirements; company policy on the conservation of orangutans and wider biodiversity; and HR policy and disciplinary processes and procedures in place for operational requirements to mitigate risks to orangutans from operational workers.

Actions recommended:

- Identify training needs to ensure the competencies of employees and contractors with responsibilities related to orangutans.
- Prepare and periodically conduct training for responsible employees and contractors, including community relations staff.
- Identify and train, in collaboration with qualified wildlife management personnel, specific personnel who have the responsibility to deal with emergency responses to orangutan issues. Orangutan issues, actions and responsibilities should also be included in the induction for employees, contractors and visitors.
- Develop information and brochures for use by all employees, contractors and visitors identifying the company's responsibilities, strategies and actions with regard to orangutan conservation. All employees and contractors should have a copy of such standard operational procedures (for details, see 3.5) and be instructed in the use of these procedures.

3.4 Ensure that all monitoring and evaluation is incorporated into a long-term adaptive conservation management plan

Scope: A company should demonstrate the operation of management review systems to ensure that lessons from past actions and experiences, or external factors such as new scientific knowledge on orangutans, are incorporated into updated conservation management plans for orangutan.

Actions recommended:

- Establish a mechanism to regularly review a company's orangutan policy and management systems so that they may be adapted to any changes in perceptions or circumstances.
- Develop a program and procedure for periodic audits of the orangutan management systems. This would be incorporated into the certification process of companies complying with ISO 14001. Companies not certified to this standard can follow self-assessment guidelines based on ISO principles.
- Seek new information from all stakeholders, including security agencies, local communities, local government agencies and the scientific community, to ensure that revised conservation management plans incorporate best technical practices and experiences.
- Carry out a periodic review of the Plan, its objectives, systems and results, to ensure its appropriateness and effectiveness in orangutan conservation, both on site and within the greater landscape.
- Identify any changes required to policies and procedures in light of any changed circumstances in technical or scientific issues in the conservation of orangutans, changes in orangutan viability at the landscape level, and any other legal, business or financial considerations.
- Update policies and procedures to accommodate the findings of such a review so as to ensure continual improvement in approaches to conserve orangutans, and enhance corporate environmental responsibility.
- Incorporate any results of this review into the planning and operational management of the concession.
- Document and communicate to employees any changes to the conservation management plan and operational procedures.

3.5 Develop standard operating procedures, work instructions and guidelines to support implementation of the conservation management plan for orangutans

Scope: A company should develop a clear and concise set of Standard Operating Procedures (SOPs) for individual activities in line with the principles and guidelines of its management. It should, at a minimum, ensure that SOPs are developed to encompass all operational actions that have a potential impact on orangutans and their habitat. This is required because generic company principles and guidelines are not in themselves sufficient to ensure that all operational activities are carried out consistently and in the manner required by the company.

Actions recommended:

- SOPs for operational activities that include dissemination of information to operational planners.
- SOPs for standardized pre-operational assessment process (pre-land disturbance/land clearing), and post-operational assessment process (monitoring).
- SOP for land disturbance and clearing to minimize forest damage during land clearing, road construction, and all other mechanical disturbances; and to protect water resources.
- SOP for routine biodiversity monitoring.
- SOP for managing and maintaining voluntary conservation set-aside areas within the concession.
- SOP for establishing and operating forest patrols in the concession.
- SOP for conducting environmental inductions for all employees, contractors and casual staff.
- SOPs for community engagement and communication protocols, especially with regard to recognizing conflicts between communities and orangutans, and having standard practices to deal with these conflicts.
- SOPs for the issuance of information, and verification of information to operational planners, field staff and teams tasked with impacting operational activities.
- SOPs for rehabilitation and restoration of degraded areas.
- SOPs about what to do when orangutan encounters or incidents occur during land clearing, felling, road building or other activities. These should include recommendations for staff behavior to prevent harm to orangutans, such as no unnecessary disturbance, no feeding, no felling of trees with orangutans in them, etc.
- SOPs for land swaps.

3.6 Communicate to local communities the importance of orangutan conservation and ways to mitigate threats to the species

Scope: A company should be proactive in its communications with communities that have settled within and/or access biodiversity areas, corridors, or controlled habitats. It needs to work with communities to identify consensus-based mitigation or conflict resolution. The Orangutan Action Plan clearly shows in section C I that the inclusion of communities and their institutions and customary laws is paramount for the protection of orangutans.

Actions recommended:

- Review the community development program to ensure that orangutan education and awareness activities are included, and that programs are included to take pressure off orangutans and their habitats through alternative livelihoods and economic activities.
- Prepare a documented process within the company's community development department to identify and engage with communities on orangutan matters, which should include a register of meetings, issues, agreements, actions and follow-up.
- Develop systems for rapid reporting of conflicts between orangutans and people, and have management SOPs in place to mitigate these conflicts and prevent harm to orangutans and people's agricultural crops and gardens.
- Identify community benefits from conservation of orangutans.
- Provide education to communities on how to mitigate perceived risks from orangutans.

3.7 Collaborate with conservation scientists and seek technical advice from them when required

Scope: A company should engage with conservation scientists and groups, or seek technical expertise from recognized academic institutions, qualified consultants, or government departments when decisions regarding interventions to conserve orangutans go beyond the company's scope of understanding or technical capabilities.

Actions recommended:

- Obtain technical support for surveying orangutans, and store survey results in a Geographic Information System (GIS).
- Develop partnerships to annually review survey data and assess impacts of conservation actions.
- Develop partnerships for review of management planning proposals and gain additional input into that process.
- Facilitate studies of orangutan ecology in forest plantations by allowing local and international researchers to work in the concession, and use the resulting information to identify key features used by orangutans (old, large fruiting trees, mineral licks, specific nesting sites, etc.).
- If the local orangutans' home range extends into neighboring concessions, collaborate with the management of these concessions and with orangutan specialists to develop greater landscape-level management plans to assist conserve such orangutans (see below).

COMMITMENT #4: LANDSCAPE-LEVEL COLLABORATIVE MANAGEMENT

A company should collaborate with other stakeholders to achieve improved planning and implementation of conservation management for orangutans in the greater landscape. To do so, it is encouraged to:

4.1 Participate in a landscape-level collaborative management group to rationalize land-use conflicts, including for orangutans and their habitat

Scope: A company is encouraged to support landscape collaborative management groups in accordance with Ministry of Forestry regulations, by allocating sufficient staff and financial resources to contribute to the following:

Actions recommended:

- Assist in land-use planning for the greater landscape.
 - Contribute to demarcation of concession boundaries.
 - With other stakeholders, assist in preparation of risk assessments and an orangutan conservation management plan for the landscape.
 - Ensure that the company's on-site orangutan management plan supports conservation management of the landscape.
 - Where possible, support research and science concerning orangutans in the greater landscape.
 - Share data, information and reports on orangutan management with other partners.
 - Collaborate with law enforcement agencies.
 - Where possible, build capacity of partners to fulfill their responsibilities.
 - Encourage and participate in the resolution of land disputes between conflicting interests of other stakeholders in the greater landscape.
 - With other stakeholders, support public awareness programs for conservation of orangutans in the area.
 - With other stakeholders, support district, provincial and national level planning to help improve biodiversity values in the greater landscape.
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This is one of four booklets on Best Management Practices for Orangutan Conservation in concession areas. The other publications in the series are: Best Management Practices for Orangutan Conservation in Natural Forest Concessions, Best Management Practices for Orangutan Conservation in Mining Concessions, and Best Management Practices for Orangutan Conservation in Oil Palm Plantations. The series also includes a set of annexes.

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